

STRUCTURAL ENGINEERING TRACK – STR

Fall			Spring		
CE XXXX	STR Core (1)	3	CE XXXX	STR Core (1)	3
CE 6720	Continuum Mechanics	3	MAE 6710	Finite Element Analysis	3
	STR Core (1)	3		STR Core (1)	3
	STR Core (1)	3		STR Core (1)	3
	SSRR Elective (2) or Technical Elective (3)	3		Technical Elective (3) or SSRS Elective (2)	3
15			15		

(1) STR Core – students must complete at least six of the following courses:

CE 5300	Advanced Design of Metal Structures
CE 5310	Pre-stressed Concrete Design
CE 5320	Advanced Reinforced Concrete Design
CE 5340	Advanced Structural Topics
CE 5700	Foundations Engineering
CE 6050	Nondestructive Testing and Evaluation
CE 6500	Bridge Design and Engineering
CE 6710	Advanced Mechanics of Materials
CE 6720	Continuum Mechanics
CE 6750	Mechanics of Composite Materials
CE 6770	Theory of Elasticity
CE 7340	Dynamics of Structures
ARCH 7210	Structural Design for Dynamic Loads
MSE 6050	Structure and Properties of Materials I
MSE 6120	Characterization of Materials
MSE 6320	Deformation and Fracture of Structural Materials

(2) Systems, Sustainability, Resilience, and Risk (SSRR) electives – students must complete one course from the following list:

CE 5000	Management of Large-Scale Projects
CE 6009	The Art and Science of Systems Modeling
CE 6030	Green Engineering
CE 6360	Smart Structures
SYS 6001	Introduction to Systems Analysis and Design
SYS 6050	Risk Analysis

(3) The technical elective may include any technical course at or above the 5xxx level approved by the academic adviser. One elective may constitute research or a professional internship (i.e., CE 6995 - refer to the CE website for details).

(4) Pre-requisite courses to begin STR ME Track include:

CE 3300	Structural Mechanics or Approved Equivalent
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CE 3330 Introduction to Structural Design or Approved Equivalent

- (5) Students may be permitted to modify this framework, pending approval of their academic advisor and the CE Director of Graduate Studies. Additionally, online courses from Virginia's CGEP program may be suitable to meet the requirements for this degree. See cgep.virginia.gov/courses for current course offerings.